June 10, 1958 G. P. McGRAW 2,837,807

ADJUSTABLE BULKHEAD

Filed April 8, 1955

FIG. 1

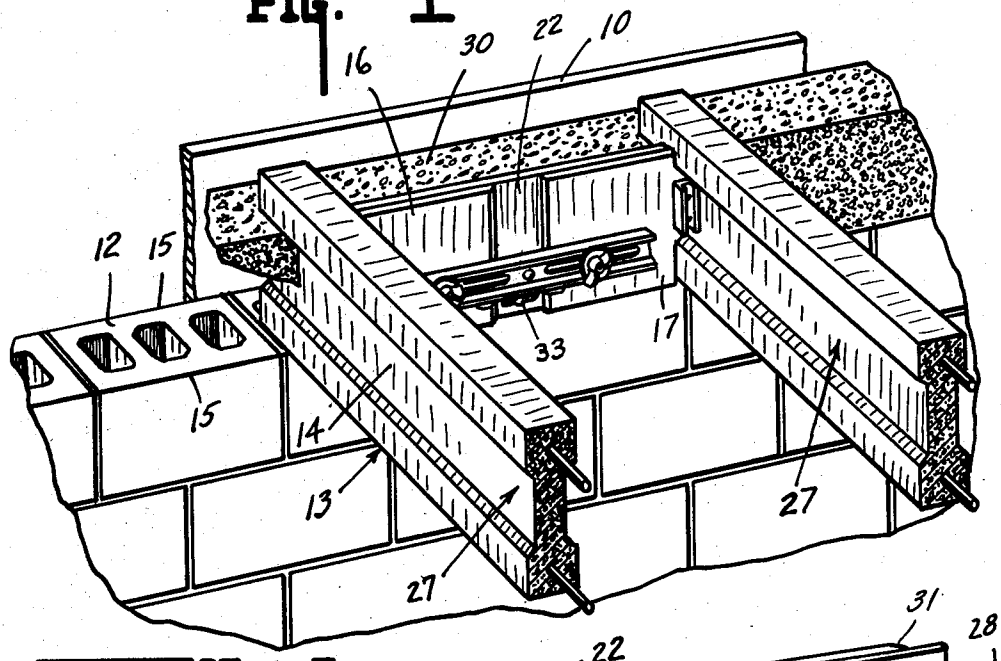


FIG 2

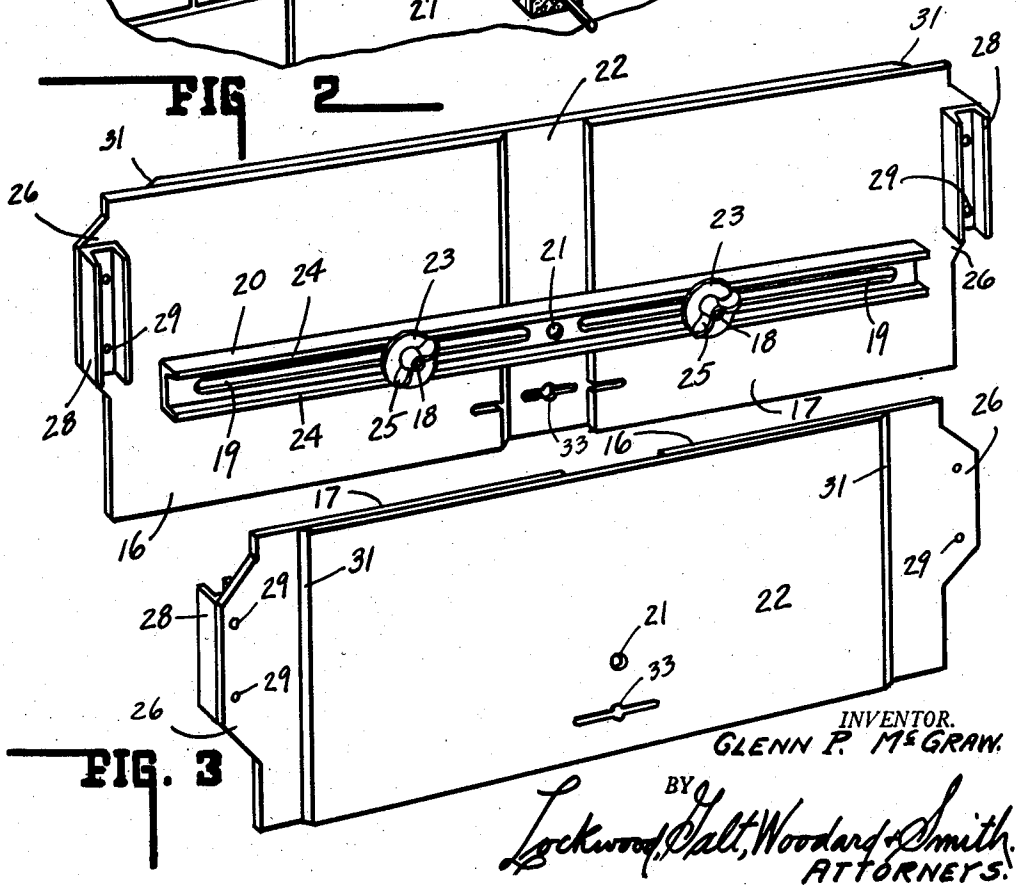


FIG. 3

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ADJUSTABLE BULKHEAD

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1 Claim. (Cl. 25—118)

This invention relates to an adjustable bulkhead, and more particularly to a form for use with precast concrete joists while concrete is being poured during the construction of a building.

As is well known, in the pouring of concrete for floors and bulkheads it is necessary to use forms to keep the concrete within the desired bounds. Such forms have heretofore been individually fashioned to meet specific requirements of the job. That is to say, since distances separating the joists vary from job to job and even in connection with the same job, it has been necessary to prepare many different sized forms. In a sense, therefore, these forms have had to be custom built, and their total expense has consequently been relatively substantial. It is the primary object of this invention to provide a form of adjustable character and construction so that it may be used from job to job regardless of the distances separating the joists.

It is a further object of the present invention to provide such a form with means that may be utilized in separating it from the concrete after the concrete has become set. As is well known, it is standard practice to remove the forms after they have served their purpose. Yet in removing them they are frequently damaged unavoidably because of the mechanical problems involved. With the present invention, on the other hand, the form is itself provided with means that facilitate its removal.

It is a still further object of the present invention to speed up the work in building construction at least to a degree by eliminating the time heretofore spent in measuring distances between joists incident to the fabrication of the right sized forms. Such measurements are unnecessary with the present invention.

The full nature of the invention will be understood from the accompanying drawings and the following description and claim.

In the drawings:

Fig. 1 is a perspective view of the invention shown in position between a pair of joists, and of a portion of the building wall, the concrete blocks and the concrete that is set through use of the invention.

Fig. 2 is a perspective view of the front side of the invention.

Fig. 3 is a perspective view of the rear side thereof.

In the drawings the outside wall of a building is shown at 10. This, of course, may be of brick, stone or any other desired substance. Laid inwardly of the wall in the usual manner and with the conventional spacing are the concrete blocks 12 upon which bears one end of the precast concrete joists 13. These joists have the usual inwardly inset web portions 14. As is customary, the end portions of the joists extend approximately half the distance between the sides 15 of the blocks, as shown.

The distance between joists varies from job to job. Because of this variation, and further because of the fact that the joists themselves are not precast with precision,

it is desirable to have a form which may itself be adjusted to the necessary length. To this end the invention is provided with a pair of laterally adjustable panels 16 and 17. Each panel carries a square headed bolt 18 or the like. Each bolt extends through the slot 19 of the channel iron 20 which is secured at 21 to the back or rear of the plate 22. As will be observed by reference particularly to Fig. 2, there is only one point of connection of this channel iron to the plate, namely the bolted connection 21. It is also apparent from that figure that the channel iron will be spaced sufficiently from the back surface of plate 22 to enable the two panels to be moved freely in a lateral direction between the iron and the plate. The bolts 18 are provided with a disc 23 which has a larger diameter than the distance between the confronting edges 24 of the channel iron. The usual wing nut 25 is provided.

Each panel is provided with an end portion 26 which is shaped and sized to nest within the recess shown generally at 27 formed by the web and the top and bottom of the joists. Extending rearwardly from each end portion is the channel 28 which is suitably secured thereto by rivets or the like 29. The channel members 28 serve a dual purpose. First, they provide reinforcement for the panels which are preferably formed of metal in order to sustain the usual knocks to which articles of this character are unavoidably subjected. Second, they provide a stop to help prevent the concrete 30 from seeping between the end portion of the form and the web of the joist.

As will be observed particularly by reference to Fig. 3 the end edges of the panel 22 are beveled at 31 so that the panel may more readily be separated from the concrete bulkhead after the concrete has set.

In operation, after the joists are positioned in the desired location on the concrete blocks the conventional hangers and sheathing (not shown) will be put in place so that the floor may be laid. One of the forms comprising the present invention is located between each pair of joists (although only one is shown thus located in the drawings). Once the forms have thus been put in place the concrete may be poured and the form will aid in keeping it in bounds. As will be observed in Fig. 1, the lower portion of the panel 22 abuts the inner face of the adjacent concrete blocks, while the upper portion of the panel extends thereabove to a point slightly below the top of the concrete joists.

In order to insure that the panel 22 will not be displaced by pressure of concrete, any conventional form-fastening device (not shown) deemed suitable under the circumstances may be employed. The aperture 33 is provided in connection with this objective.

Once the concrete has set the forms will be removed. First the wing nuts may be loosened whereupon the two rear panels may be moved laterally inwardly. To facilitate this motion the channel irons 28 are provided, it being possible to use them as bearing points for pinch or crowbars that are customarily used. Once the two panels are moved inwardly a sufficient distance to clear the joists, the pinch or crowbar may be used to separate the front panel from the adjacent concrete. As aforementioned, the beveled ends of this panel facilitate such separation or removal. Once the form has been removed it is capable of further use, it being of such character that it can be used repeatedly without damage.

While the invention has been illustrated and described in detail in the drawings and foregoing description, the same is to be considered as illustrative and not restrictive in character, it being understood that only the preferred embodiment has been shown and described and that all changes and modifications that come within the

spirit of the invention and the scope of the claim are also desired to be protected.

The invention claimed is:

An adjustable form for use with precast concrete joists having inset webs in the sides thereof, comprising a stationary panel having a flat front face, an elongated U-shaped channel fixedly connected to said panel extending substantially the length thereof and spaced from the rear face of the panel, said channel including a pair of slots in the bight portion thereof, a pair of laterally spaced and aligned flat panels interposed between the bight of said channel and said stationary panel, each of said aligned panels having a projection extending through a slot and being movable laterally relative to said channel and to said stationary panel, said aligned panels each having an outside end portion shaped to conform to the configuration of the web of an adjacent joist and including at a

point adjacent said outside end portion an upright channel adapted to abut said web to reinforce said panel and to facilitate removal of the form, and means associated with each projection and said elongated U-shaped channel for retaining said aligned panels in any selected position.

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